Colorado Department of Public Health and Environment
Hazardous Materials and Waste Management Division
4300 Cherry Creek Dr. S. | Denver, CO 80246
303-692-2021

Date: November 7, 2013

Guidance Document: Suggested Minimum Requirements for a Typical Groundwater Report

1. **Introduction**
   - **a.** Report purpose (e.g. sampling dates, semi-annual/annual/quarterly sampling, etc.)
   - **b.** Certification statement such as: "*I certify that I have reviewed these reports and as a qualified groundwater scientist as defined by Section 1.2 of the Regulations Pertaining to Solid Waste Sites and Facilities (6 CCR 1007-2, Part 1) this report, and all the information presented, to the best of my knowledge and ability, is a true and accurate reflection of the regulatory monitoring and testing performed.*"
   - **c.** Site location information (i.e. address, site map and possibly an area map)
   - **d.** Summary of significant historic events or site-specific consideration that may influence monitoring results as necessary
   - **e.** Report findings overview/summary of significant aspects: optional but useful to assist reader in following main points
   - **f.** Identify the sampling plan and/or operations plan or compliance orders followed; include date of document(s)
     - **i.** If deviations from the plan(s) occurred or any extraordinary events may have impacted sampling and/or results, summarize the deviations, events and any corrective actions taken.

2. **Field Information**
   - **a.** Current well layout and information on any field inspections (e.g. summary, figures, tables: well name, total depth, casing elevation, ground elevation, water elevation, screen depth, screen interval, etc.; any damage to wells and inspection field forms, if used)
   - **b.** Water level measurements (e.g. time series/trend charts and field forms)
   - **c.** Potentiometric surface maps; include figure and discussions on any changes
   - **d.** Field parameters (e.g. pH, conductivity, temperature, etc.); include field forms in the report and discuss any necessary field calibration
   - **e.** Summary of significant events impacting the sampling event.

3. **Groundwater Monitoring Results**
   - **a.** Sampling results (i.e. tables, time series/trend charts and summary of findings)
   - **b.** Significant changes; describe trends (changes in concentrations from previous sampling events)
   - **c.** Addresses statistical findings for the event; include back-up materials as necessary (e.g. Shewart-Cusum charts, tables, etc.)
   - **d.** Assessment of statistically significant increases, verification monitoring, alternative source demonstrations and any notifications including dates sent to division, as necessary
   - **e.** Include full copies of laboratory analytical reports, QA/QC and chain-of-custody
   - **f.** Discuss any QA/QC concerns from the laboratory if they impact results as necessary.

4. **Leachate Sampling and Analyses (if applicable)**
   - **a.** Leachate collection procedures and monitoring system
   - **b.** Leachate sampling EPA methods/analytical procedures and parameters
   - **c.** Leachate monitoring scheduling
   - **d.** Analytical testing results and discussion
   - **e.** Include full copies of laboratory analytical reports, QA/QC and chain-of-custody

5. Discuss scheduling/future sampling events and any significant aspects of the future sampling event to be considered.

6. Conclusion: Summarize main assumptions, points and findings.

7. Recommendation as necessary to address main points; include a statement that no recommendations are made if there are no recommendations.

8. References